electromechanical interval, predict postoperative atrial fibrillation in elective coronary artery bypass patients.
Methods: A prospective study evaluated preoperative clinical and echocardiographic data in 192 patients who underwent elective coronary artery bypass from 2010 to 2012.
Results: 18 (9.37%) patients developed postoperative atrial fibrillation. Compared to patients without postoperative atrial fibrillation, these 18 had significantly longer intensive care unit and hospital stays, they were significantly older (58.62 ± 10.02 vs. 53.22 ± 8.23 years; $p < 0.02$), with a larger left atrial volume (83.39 ± 8.31 vs. 55.47 ± 8.37 cm^3, $p < 0.001$), longer atrial electromechanical interval (133.67 ± 8.15 vs. 98.05 ± 6.71 ms $p < 0.0001$), and lower tissue Doppler imaging systolic velocity wave amplitude (6.6 ± 1 vs. 9.4 ± 2.2 cm s^{-1}; $p < 0.001$); they also had a higher prevalence of hypertension (61.11% vs. 38.5%; $p < 0.04$). Using 115 ms as the cutoff value of atrial electromechanical interval enabled us to detect patients who developed postoperative atrial fibrillation with 100% sensitivity, 77% specificity, 78% positive predictive value, and 100% negative predictive value.
Conclusion: Older hypertensive patients are at higher risk of developing postoperative atrial fibrillation. Preoperative measurement of atrial electromechanical interval by tissue Doppler echocardiography is a useful predictor of postoperative atrial fibrillation in coronary artery bypass patients.

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68. Bilateral internal mammary artery in coronary artery bypass grafting and the risk of sternal wound infection in diabetic patients

Salah Eldien Altarabsheh, Salil Deo, Hamoud Obied, Yagzan Obeidat, Lyle Joyce, Soon J Park

Background: Coronary artery bypass grafting is superior to percutaneous interventions in diabetic patients with multi-vessel coronary disease. The use of bilateral internal mammary arteries may lead to better long-term survival, but the risk of postoperative deep sternal wound infection has limited its use in diabetic patients. However, studies have reported conflicting results.
Methods: MEDLINE, EMBASE, World of Science, and the Cochrane library were searched for studies comparing the incidence of deep sternal wound infection in diabetic patients undergoing either (LITA) or BITA harvest. We used random effect models to compare risk ratios within groups.
Results: One randomized controlled trial and 10 observational studies (126,235 diabetic patients: 122,465 LITA, 3770 BITA) met inclusion criteria. Deep sternal wound infection occurred in 3.1% and 1.6% for the BITA and LITA cohorts, respectively. The risk ratio for deep sternal wound infection development was 1.71 (1.37–2.14) for BITA compared with LITA. Patients who underwent skeletonized BITA harvest had a similar risk of deep sternal wound infection compared with LITA (0.9 [0.42–2.09]), although pedicled harvest demonstrated increased risk (1.77 [1.4–2.23]). Early mortality was comparable in the LITA cohort (2.5%) and the BITA cohort (2.3%; $p = 0.8$).
Conclusions: The risk of sternal wound infection can be minimized in diabetic patients undergoing CABG by performing ITA harvested in a skeletonized manner with meticulous attention to preserving sternal blood flow. Pedicled harvest is to be discouraged when utilizing both ITA owing to a significant increase in the risk of sternal wound infection.

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69. Does pulmonary hypertension affect outcome after mitral valve surgery

Nedim Selimovic (Reem Alameer), Ahmed Abdulshakour, Mohammad Ayaz

Background: Pulmonary hypertension (PH) due to left heart disease (LHD) is the most common form of pulmonary hypertension. We know from previous studies that PH in patients with LHD is associated with poor prognosis. Regarding incidence and prevalence of PH associated with mitral valve disease we have different data depending of study population. The purpose of this study was to evaluate effects of pulmonary hypertension on short and long term survival following mitral valve surgery at KFSH&RC.
Methods: Retrospective study of all patients who have undergone mitral valve (MV) surgery since January 2010 until December 2011 with follow up to December 2013. Pulmonary artery pressure was assessed by Doppler echocardiography pre- and postoperatively. The impact of pulmonary hypertension (PASp $\geqslant$ 50 mm Hg) on early (30 days) and late outcomes and duration of hospital stay was analyzed.
Results: During the period of 2 years 233 patients (63% female) with mean age 45 ± 14 (range 19–83 years) underwent MV surgery. Mean follow up was 2.8 ± 0.97 years. Main indication for MV surgery was rheumatic valve disease (83%). Isolated MV surgery has been performed in 130 patients and combine valve surgery in 103 patients. Mortality was significantly higher after combine valve surgery ($p = 0.028$). Primary valve surgery has been done in 162 cases and re-do surgery in 71 cases. Interesting, there were no difference in survival between these two groups ($p = 0.88$). There were no significant difference in survival after MV replacement ($n = 195$) and MV repair ($n = 38$; $p = 0.18$). Pulmonary hypertension was present in 115 (51%) patients. Duration of hospitalization stay after valve surgery was almost twofold longer in patients with PH (24 ± 48 vs.13 ± 14 days, $p = 0.02$). Patients died within 30 days had a significantly higher PASp (64 ± 30 vs. 48 ± 17 mmHg; $p = 0.003$). We found a clear tendency